

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in this application.

Listing of Claims:

1. (Currently amended) A method for the fabrication of a dental coping of a dental prosthesis of at least one tooth to be fitted over a tooth preparation, comprising:

- a) providing a three-dimensional (3D) digital data relating to the patient's dentition, said 3D data including data representative of the surface topology of said preparation and its surroundings;
- b) generating a three-dimensional (3D) virtual model of a dental coping for said at least one tooth based on said 3D digital data, such that the inner surface of the virtual coping fits the virtual model having an outer surface and an inner surface for fitting over a portion of the surface of the tooth preparation in close engagement;
- c) generating a computerized numerical control (CNC) set of instructions corresponding to the 3D model of said coping;
- d) based on said set of instructions, fabricating a wax model of said coping by a computerized numerical control (CNC) milling machine by milling an outer surface of said wax model corresponding to said outer surface of said virtual model and by milling an inner surface of said wax model corresponding to said inner surface of said virtual model; and
- e) fabricating a dental coping from the wax model.

2. (Original) A method according to claim 1, wherein the 3D digital data comprises finish line data of said coping.
3. (Original) A method according to claim 1, wherein step (a) is performed using a suitable optical scanner.
4. (Original) A method according to claim 3, wherein said scanner comprises a probe for determining three dimensional structure by confocal focusing of an array of light beams.
5. (Original) A method according to claim 1, wherein step (a) is performed directly on the intraoral cavity comprising said preparation.
6. (Original) A method according to claim 1, wherein said digital data of step (a) is obtained from a virtual model of a prosthesis designed for said preparation.
7. (Original) A method according to claim 1 wherein in step (b) an external surface of the virtual coping is created based on predetermined criteria.
8. (Original) A method according to claim 7, wherein said criteria relate to providing adequate mechanical strength for the prosthesis.
9. (Original) A method according to claim 1, wherein step (e) is carried out according to a lost wax process.

10. (Original) A method according to claim 1, wherein said dental coping is made from a suitable metal.
11. (Original) A method according to claim 1, wherein said dental coping is made from a suitable ceramic material.
12. (Original) A method according to claim 1, wherein said dental coping is adapted for use with a crown prosthesis.
13. (Original) A method according to claim 1, wherein said dental coping is adapted for use with a bridge prosthesis.
14. (Original) A method according to claim 13, wherein step (d) further comprises the steps of providing wax replicas of suitable connectors and/or one or more pontics, and joining said replicas to wax models of the copings required for said prosthesis.
15. (Original) A dental coping, fabricated according to the method of claim 1.
16. (Currently amended) A method for the fabrication of a coping wax model to be used for the fabrication of a dental coping of a dental prosthesis of at least one tooth to be fitted over a tooth preparation, comprising:
 - i. providing a three-dimensional (3D) digital data relating to the patient's dentition, said 3D

data including data representative of the surface topology of said preparation and its surroundings;

ii. generating a three-dimensional (3D) virtual model of a dental coping for said at least one tooth based on said 3D digital data, such that the inner surface of the virtual coping fits the virtual model having an outer surface and an inner surface for fitting over a portion of the surface of the tooth preparation in close engagement;

iii. generating a computerized numerical control (CNC) set of instructions corresponding to the 3D model of said coping; and

iv. based on said set of instructions, fabricating a wax model by a computerized numerical control (CNC) milling machine by milling an outer surface of said wax model corresponding to said outer surface of said virtual model and by milling an inner surface of said wax model corresponding to said inner surface of said virtual model.

17. (Original) A method according to claim 16, wherein step (i) is performed using a suitable optical scanner.

18. (Original) A method according to claim 17, wherein said scanner comprises a probe for determining three dimensional structure by confocal focusing of an array of light beams.

19. (Original) A method according to claim 16, wherein step (i) is performed directly on the intraoral cavity comprising said preparation.

20. (Original) A method according to claim 16, wherein said digital data of step (i) is obtained from a virtual model of a prosthesis designed for said preparation.

21. (Original) A method according to claim 16 wherein in step (ii) an external surface of the virtual coping is created based on predetermined criteria.
22. (Original) A method according to claim 21, wherein said criteria comprise relate to providing adequate mechanical strength for the prosthesis.
23. (Original) A method according to claim 16, wherein said dental coping is adapted for use with a crown prosthesis.
24. (Original) A method according to claim 16, wherein said dental coping is adapted for use with a bridge prosthesis.
25. (Original) A method according to claim 24, wherein step (iv) further comprises the steps of providing wax replicas of suitable connectors and/or one or more pontics, and joining said replicas to wax models of the copings required for said prosthesis.
26. (Original) A wax coping, fabricated according to the method of claim 16.
27. (Currently amended) A system for the fabrication of a dental coping of a dental prosthesis of at least one tooth to be fitted over a tooth preparation, comprising:
 - A. means for providing a three-dimensional (3D) digital data relating to the patient's dentition, said 3D data including data representative of the surface topology of said preparation and its

surroundings;

- B. means for generating a three-dimensional (3D) virtual model of a dental coping for said at least one tooth based on said 3D digital data, such that the inner surface of the virtual coping fits the virtual model having an outer surface and an inner surface for fitting over a portion of the surface of the tooth preparation in close engagement;
- C. means for generating a computerized numerical control (CNC) set of instructions corresponding to the 3D model of said coping;
- D. means for fabricating a wax model of said coping by a computerized numerical control (CNC) milling machine by milling an outer surface of said wax model corresponding to said outer surface of said virtual model and by milling an inner surface of said wax model corresponding to said inner surface of said virtual model; and
- E. means for fabricating a dental coping from the wax model.

28. (Currently amended) A system for the fabrication of a coping wax model to be used for the fabrication of a dental coping of a dental prosthesis of at least one tooth to be fitted over a tooth preparation, comprising:

- (I) means for providing a three-dimensional (3D) digital data relating to the patient's dentition, said 3D data including data representative of the surface topology of said preparation and its surroundings;
- (II) means for generating a three-dimensional (3D) virtual model of a dental coping for said at least one tooth based on said 3D digital data, such that the inner surface of the virtual coping fits the virtual model having an outer surface and an inner surface for fitting over a portion of the surface of the tooth

preparation in close engagement;

- (III) means for generating a computerized numerical control (CNC) set of instructions corresponding to the 3D model of said coping; and
- (IV) means for fabricating a wax model based on said set of instructions by a computerized numerical control (CNC) milling machine by milling an outer surface of said wax model corresponding to said outer surface of said virtual model and by milling an inner surface of said wax model corresponding to said inner surface of said virtual model.